(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 1 September 2005 (01.09.2005)

PCT

(10) International Publication Number WO 2005/081398 A1

(51) International Patent Classification⁷:

H03D 7/14

(21) International Application Number:

PCT/IB2004/000164

(22) International Filing Date: 22 January 2004 (22.01.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(71) Applicant (for all designated States except US): NOKIA CORPORATION [FI/FI]; Keilalahdentie 4, FIN-02150 Espoo (FI).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): TERVALUOTO, Jussi-Pekka [FI/FI]; Puulinnankatu 10D32, FIN-90570 Oulu (FI). RUHA, Antti [FI/FI]; Uistintie 21a, FIN-90550 Oulu (FI). RUOTSALAINEN, Tarmo [FI/FI]; Matilaisentie 5a1, FIN-90570 Oulu (FI).
- (74) Agent: COHAUSZ & FLORACK; Bleichstrasse 14, 40211 Düsseldorf (DE).

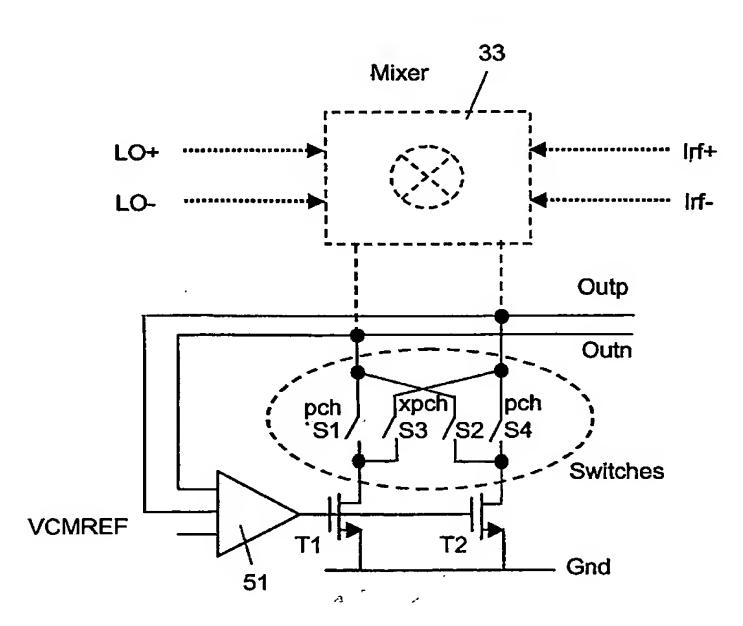
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MIXER CIRCUIT



(57) Abstract: The invention relates to a mixer circuit 31 comprising a down-conversion mixing component 33 arranged for down-converting an input radio frequency signal Irf+, Irf-. In order to improve such a mixer circuit, it is proposed that it comprises in addition an active mixer load circuit 34 connected to output terminals of the mixing component. The active mixer load circuit includes an active mixer load 51, T1, T2 and modulating means S1-S4 arranged for modulating a flicker noise produced by the active mixer load away from the signal band of a signal Ibb+, Ibb- output by the down-conversion mixing component. The invention relates equally to a receiver, a chip and a device comprising such a mixer circuit and to a method for use with such a mixer circuit.